

## TECHNICAL REPORT TO THE NEW YORK STATE IPM GRANTS PROGRAM

**Title:** Reducing Damage from Potato Leafhoppers on Seedling Alfalfa Stands in New York through Variety Selection: A Comparison of Resistant vs. Susceptible Varieties.

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### **Abstract:**

Alfalfa variety trials were planted at two locations in NY (Ithaca and Western NY (WNY)). Varieties planted were either resistant or susceptible to potato leafhopper (PLH), the most damaging insect pest of alfalfa in the Northeast. Varieties were evaluated and compared in the seeding year for yield, quality, and PLH symptoms. At WNY, the resistant varieties had significantly lower PLH damage scores than the susceptible varieties, but were not significantly different in yield. The application of insecticide to seeding alfalfa surrounding the trial may have reduced the overall PLH population and yield differences even though the trial itself was not sprayed. At Ithaca, the resistant varieties had significantly lower PLH damage scores, fewer PLH nymphs per stem, and higher yield than the susceptible varieties. Within the group of resistant varieties, there was no correlation between PLH damage score and yield. Using near infrared reflectance spectroscopy and a computer simulation program (FORVAL), it was determined that the resistant varieties had significantly higher crude protein and fiber concentrations, and higher hay value per acre. These seeding year results should be considered preliminary since continued comparisons of yield and forage quality in established stands are needed to more fully evaluate the PLH protection potential of these varieties and their adaptability to New York conditions.

For a printed copy of the entire report, please contact the NYS IPM office at:

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